March 12, 2010 10:02:16 AM

Page 1

Item ID:

D3671-1

Accept

Setup Start

Stop



**Revision ID:** 

Item Name: Placard

Required Date: 3/18/10

3/12/10

Start Qty: 24.00 Req'd Qty: 24.00

**Cust Item ID:** 

**Customer:** 

Reference:

**Start Date:** 

Process Plan: **Approvals:** 

Date: 10/3/12 Tooling:

Date:

Run Start

QC:

Date:

SPC (Y/N):

Date:

Stop

Sequence ID/ Work Center ID

**Operation** Description

Set Up/ Run Hours Draw Number

Draw Rev.

Plan Accept Qty Code

Reject Qty

Reject Number

Stamp

Draw Nbr

**Revision Nbr** 

D3671

100

Rev A

**PURCHASING** 

Memo

0.00

0.00

CZ 10/3/12

24

Purchasing Purchasing

Issue P/O: \_\_\_\_\_\_\_\_ | Make as per Dwg D36711 | Red letters (0.100" height) on white adhesive back! Possible Manufacture: From 3M 7 mil masking

film # 8522CP or Avery IPM # 2031 | Possible Supplier: Studio

Lettrage | | Material release note is required

110

Receive & Inspect for Damage & Mat'l Certs

0.00

Packaging

Memo

0.00

Packaging

Ensure Material Release Note is attached

120

QC

QC6- Inspect dimensions to drawing

Memo

Quality Control

W/O:			WO	RK ORDER CHANG	ES					<u>-</u>
DATE STEP		PROCEDURE CHANGE					Date	Qty	Approval Chief Eng / Prod Mgr	Approva QC Inspect
							,			
·····										
Part No	);	PAR #:	Fault Categ	jory:	_ NCR:	Yes I	No <b>DQ</b>	A:	_ Date: _	
	Reso	olution:	Disposition	1:	_ QA: N	I/C Clo	sed:		Date: _	
NCR:			WORK ORDE	R NON-CONFORMA	ANCE (	NCR	)			
		Description of NC	ion of NC Corrective Action S			Section B			Approval	Approva
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng		Sign & Date		on C	Chief Eng	QC Inspect
					ļ					

NOTE: Date & initial all entries

Page 2

March 12, 2010 10:02:17 AM

Item ID:

D3671-1

Accept

Setup Start



**Revision ID:** 

Item Name: **Start Date:** 

Placard

3/12/10

Start Qty: 24.00

Req'd Qty: 24.00

**Cust Item ID:** 

**Customer:** 

Draw

Number

Reference:

**Approvals:** 

Required Date: 3/18/10

**Process Plan:** 

Date:

**Tooling:** 

Date:

Run

Start

Stop



QC:

Date:

SPC (Y/N):

Set Up/

Date:

Draw

Rev.

Plan Accept

Qty

Code

Reject Qty

Reject

Insp. Number Stamp

Sequence ID/ Work Center ID

130

Packaging

Packaging

Operation Description

Identify as per dwg & Stock Location:

Memo

**Run Hours** 0.00

0.00

140

QC21- Final Inspection - Work Order Release



**Quality Control** 

Memo

0.00

0.00

10/03/24 H) CZ10/3/19

Dart Aerospace Li	td
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W/O:	I		WO	RK ORDER CHANG	SES					
DATE	STEP	PRO	OCEDURE CHAP	IGE	1	Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector
Part No		PAR #:								
	Re	solution:	Disposition	):	QA: N	I/C Clo	sed:		Date:	
NCR:		•	WORK ORDE	R NON-CONFORM	ANCE (	NCR	)			
D.47-F	0750	Description of NC	1	Corrective Action Sec	tion B		Verific	cation	Approval	Approval
DATE	STEP	Section A	Initial Chief Eng	Action Description Chief Eng		Sign & Date	Secti		Chief Eng	QC Inspector
			1			***************************************				
	6 7 4									
	1									

NOTE: Date & initial all entries

### **Picklist Print**

March 12, 2010 10:02:16 AM

Work Order ID: 56883

Parent Item:

D3671-1

Parent Item Name:

Placard

**Comments:** 

IPP: AE:07.11.12

ecn 1019 New issue

EC verified by:DD

**Start Date: 3/12/10** 

Remaining

Required Date: 3/18/10

**Start Qty: 24.00** 

Required Qty: 24.00

Component Item ID/ Item Name

Replacement Mfg/ Item ID

Purch

Purchased

Primary Bin Item Location

No

Last Location Route Seq ID Unit of Measure

Each

Qty on Hand

0.0000

24.0000

Qty Qty To Pick Issued

Date Issued

Status

D3671-1P

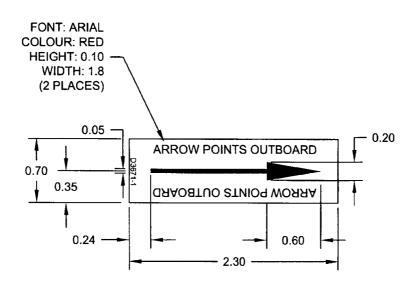
Placard

Dart Aerospace	Ltd
----------------	-----

W/O:				WORK ORDER CHANGES							
DATE	STEP		PR	OCEDURE CHANGE		Ву	Date	Qty	Approval Chief Eng / Prod Mgr	Approval QC Inspector	
									·		
				The state of the s							
Part No	:		PAR #:	Fault Category:	NCR:	Yes	No <b>DQ</b>	A:	_ Date: _		
	Resc	olution:		Disposition:	QA: I	WC C	losed:	1515 15	Date: _		

	· ·	WORK ORDI	ER NON-CONFORMANC	E (NCR)			
	Description of NC		Corrective Action Section B	Verification	Approval	Ammerical	
STEP	Section A	Initial Chief Eng	Action Description Chief Eng	Sign & Date	Section C	Chief Eng	Approval QC Inspector
				į			
	STEP	STEP Description of NC	STEP Description of NC Section A Initial	STEP Description of NC Section A Initial Action Description	STEP Description of NC Section A Initial Action Description Sign &	STEP   Description of NC   Initial   Action Description   Sign & Verification   Section C	STEP Description of NC Section A Section B Initial Action Description Sign & Verification Section C Chief Eng

NOTE: Date & initial all entries



cd1013112 w10:56883

### **D3671-1 PLACARD**

### NOTES:

1) MATERIAL: RED ARROW ON WHITE ADHESIVE BACK VINYL

MANUFACTURED FROM 3M 7 MIL MASKING FILM #8522CP OR AVERY IPM #2031. SIZE IS 2.30" LONG x 0.70" WIDE

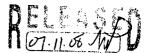
2) FINISH: NONE

3) TOLERANCES: PER DART QSI 018 UNLESS OTHERWISE NOTED

4) UNITS: INCHES UNLESS OTHERWISE NOTED 5) BREAK SHARP EDGES: 0.005 TO 0.010 MAX

6) IDENTIFICATION: NONE

7) WEIGHT: N/A



Α	NEWIS	SUE	DC	07.08.27		
REV.			DESCRIPTION	BY	DATE	
DESIGN		DC	DART AER	OSPACE	LTD	
DRAWN		J)C	HAWKESBURY,	ONTARIO, CAN	ADA	
CHECK	ED	The state of the s	DRAWING NO.		REV. A	
MFG. AF	PPR.	E-1	D3671	5	SHEET 1 OF 1	
APPRO	/ED	M	TITLE		SCALE	
DE APPR.			PLACARD			
DATE	07.08	8.27	COPYRIGHT © 2007 B THIS DOCUMENT IS PRIVATE AND CONFIDENTIAL A NOT TO BE USED FOR ANY PURPOSE OR COPIED	ND IS SUPPLIED ON THE EXPRE	SS CONDITION THAT IT IS	



Dart Aerospace Ltd. 1270 Aberdeen Street Hawkesbury, ON K6A 1K7

Tel: 613 632 9577 Fax: 613 632 1053

### PURCHASE ORDER

### Purchase Order ID PO11503

Purchase Order Date 3/12/10 PO Print Date 3/12/10

Page Number 1 of 1

Order From:

VC-STU001

STUDIO DE LETTRAGE 2001 210 MAIN WEST HAWKESBURY, ON K6A 2H6 CA

Contact Name

Vendor Phone

613 632 5449

Vendor Fax

613 632 9491

Vendor Account Nbr

Buyer

Requisition Nbr

Tax Resale Nbr

Terms Currency

**FOB** 

Net 30 CAD

10127-2607

Chantal Lavoie

Ship To:

DART AEROSPACE LTD

1270 ABERDEEN

HAWKESBURY, ON K6A 1K7

**CANADA** 

Line N	lbr Reference Revision ID Vendor Part Number	Description/ Mfg ID	Req Date/ Taxable Un	Req Qty/ nit of Measure	Ship Method	Unit Price	Extended Pric
1	D3671-1P	Placard	3/17/10 Yes	24.00 Each	Yours ppd	\$5.0000	\$120.

Special Inst:

AS PER DWG D3671 REV. A

B56883

MANUFACTURE FROM 3M 7MIL MASKING FILM #8522CP OR AVERY

IPM #2031

PO Total:

\$120.

CERTIFICATE OF CONFORMITY REQ'D UPON DELIVERY



No substitution or deviation without consent.

Certification required when applicable

Change Nbr:

Change Date: 3/12/10

Certificate of Conformity or Material



**VENDU À:** 

SOLD TO:

K6A 1K7

Dart Aerospace Ltd

1270 Aberdeen Hawkesbury, Ontario 210 MAIN W., HAWKESBURY, ONT. K6A 2H6

INVOICE / FACTUF.

Tel.: 613 632-2001 Fax: 613 632-9491

www.studiolettrage.com

No.:

13523

DATE:

03/16/2010

PAGE

1 of 1 Re: Quote No. 8449

SHIPPED TO:

LIVRÉ À:

Dart Aerospace Ltd

Hawkesbury, Ontario

	ITEM ARTICLE	QTY QYÉ	UV NU	VIT ITÉ	DESCRIPTION	GST TPS	PST TVP	UNIT PRICE PRIX UNITÉ	АМО
			24		D3671-1P Setup printing G - GST @ 5%; PST @ 8% GST	G G	TVP	2.0833 50.0000	50. 50.
					PST Exempt: #6122-5207				5.
					50/03/12				
	Studio de Lettrage	GST: #869	9034678RF	P001				<b>TO-1</b>	
1	PD 11503 Sold By:							TOTAL	105.0

### **Product Bulletin 8522**

**3M** 

Release F, Effective January 2003 Black bar in margin indicates a change

# **Scotchcal** ™ Opaque Imaging Media 8522

### Description

This media is specially formulated to dry quickly after printing. Production of outdoor weatherable and long-term indoor durable graphics is now easier than ever. Its changeable adhesive allows easy removal for up to one year.

### Advantages

- Optimized for use with selected Epson Stylus Proprinters and Epson Archival inks.
- Optimized for use with selected HP DesignJet Printers and HP DesignJet Ink System UV or HP83UV Color Ink System
- For making opaque, laminated graphics that are outdoor weatherable and long-term indoor durable
- Media:
  - For opaque (reflective) graphics
  - Changeable, easy to remove from warranted substrates up to 1 year later
  - Dries quickly after printing so the overlaminate can be applied almost immediately
  - Low slippage paper liner for superior tiling
- Overlaminates:
  - Provide additional UV (ultraviolet) and physical protection for making weatherable finished graphics
  - Available in luster and matte gloss
  - Adhesive allows for heat-assisted or cold-temperature lamination

### Applications and Uses

3M Scotchcal Changeable Opaque Imaging Media 8522 is intended only for ink jet printing and for use with the listed Compatible Products and Equipment and the following applications. Any other application is NOT warranted by 3M or covered by the worldwide 3M MCS Warranty unless 3M gives its prior written approval for the application.

- First surface images (the image is on top of the film) for opaque posters and signs, including:
  - Graphics for vans, personal vehicles, trucks and buses
  - Novelty posters
  - Retail and point-of-purchase displays
  - Information graphics such as maps and directories
  - Entertainment promotions in museums, zoos, parks, theatres, sports venues
  - Education and presentation graphics

- Legal and courtroom exhibits
- For flat or simple curved surfaces, with or without rivets, used in vertical (± 10°) applications

### Limitations of End Uses

The following uses and applications are specifically NOT warranted.

- Fleet applications in areas that use salt for winter road maintenance
- Application to non-warranted substrates, including wallboard
- Applications subjected to gasoline vapors or spills
- Application to corrugated or highly irregular surfaces or sharply raised areas
- Graphics applied to stainless steel, including stainless steel vehicles
- On flat surfaces with rivets, tenting of 4 to 10 mm around rivets may be expected; rivets may be cut around to eliminate tenting.

Note: Standard ink jet technology is water based. Water-based chemistry is susceptible to the extremes of heat and humidity. This is a factor in most product constructions on the market. Read the Fabrication. Shelf Life and Storage sections in this bulletin. Staying in the middle of these ranges always provides optimum performance.

# **Compatible Products and Equipment**

### Thermal Ink Jet Printing Systems

- Epson Stylus Pro 9500, Stylus Pro 10000 printer
  - Epson Archival Inks
- Epson Stylus Pro 10600 printer
  - Epson Archival Inks
- HP DesignJet Printers 2000 and 3000 series
  - HP DesignJet Ink System UV (pigment-based ink)
- HP DesignJet Printers 5000 series
  - HP83UV Color Ink System

### Overlaminates (required)

- 3M<sup>--</sup> Luster Overlaminate 8519 (semi-gloss)
- 3M Matte Overlaminate 8520

Note: For the full product names of the 3M products listed on this page, please see page 1.

### **Warranted Substrates**

Media 8522 is warranted for use on the following rigid substrates.

Some substrates may "out-gas", resulting in tiny bubbles throughout the surface of the graphic. For maximum performance, be sure the substrate you select is properly cleaned and prepared as recommended by the manufacturer. See Instruction Bulletin 5.1 for additional information.

- · Alodine (anodized aluminum)
- Automotive panels (automotive painted steel)
- Fruehauf (painted aluminum)
- FRP (fiberglass reinforced plywood)
- Glass
- Imron E (polyurethane-painted metal panel)
- Acrylic
- Sintra "board

# Test and Approve Non-warranted Substrates Before Use

Media 8522 is not warranted for any substrate other than those listed above. If you want to use it for other substrates, 3M recommends that you test and approve the media for both adhesion and removal characteristics.

### **Characteristics**

Characteristic	Description
Media	7 mil, white, opaque graphic film
Liner	Low-slippage, lay flat paper
Adhesive	Changeable, pressure sensitive
Thickness (media and adhesive)	7.5 to 8 mil (nominal)
Application substrates	See Warranted Substrates, above
Application surfaces	Flat or simple curved surfaces, with or without rivets, used in vertical (± 10°) applications (no corrugations)
Application temperature range	. 28° to 110°F (-2° to 43°C) (air and surface)
Roll sizes	36" x 45 feet (914 mm x 13.5 m) 54" x 45 feet (1372 mm x 13.5 m)

# How to Become a 3M Ink Jet Registered Fabricator

Only 3M Thermal Ink Jet Registered Fabricators are eligible to offer 3M MCS warranted graphics. In order to become certified, a fabricator must complete the requirements as specified in the 3M Ink Jet Graphics Registered Fabricator Reference Manual located on the 3M website at www. scotchprint.com

### **Effective Performance Life**

To obtain the warranty given below, the graphics must be made according to 3M's recommendations which are detailed in the Warranty and Limited Remedies on page 3. Also see the section, Removability.

### **Warranted Durability**

Media 8522 with	Epson Pr	ors		
Overlaminate 8519 or 8520	Outdoor	Indoor	Outdoor	Indoor
Applied to Warranted Substrates	2 years	5 years	3 years	5 years

### Removability

Imaging media 8522 is removable from warranted substrates for 1 year without the aid of chemical strippers or accessories. Refer to Instruction Bulletin 4.23 for additional information.

#### **Fabrication**

Graphics must be made according to 3M's recommendations which are detailed in the Warranty and Limited Remedies on page 3.

See Instruction Bulletin 4.23 for detailed fabrication, printing and mounting information.

### **Graphic Construction Options**

#### Opaque (Reflective) Graphics

Opaque graphics made with imaging media 8522 require an overlaminate and an opaque substrate.

Viewer/Light Source	
	Overlaminate 8519, 8520 Adhesive on bottom
	Imaging Media 8522
	Image on top; adhesive on botton  Opaque Substrate

Note: For the full product names of the 3M products listed on this page, please see page 1.

# Shelf Life and Storage

- 3M Scotchcal Changeable Opaque Imaging Media 8522 has a shelf life of one year.
- Storage conditions (new and partially used rolls). For optimum performance, use the middle of these ranges:
  - Original packaging, including plastic wrap
  - Relative humidity of 20% to 80%
  - Temperature of 33° to 104°F (0° to 40°C) Away from direct sunlight
- Do not stack unprotected rolls or lay sharp or heavy objects on them.

### Health and Safety

### 

When handling any chemical products, read the manufacturers' container labels and the Material Safety Data Sheets (MSDS) for important health, safety and environmental information.

To obtain MSDS sheets for 3M products:

- By fax, call 1-800-364-0768 in the US and Canada or 1-650-556-8417 for all other locations.
- Electronically, visit us at http://www.3M.com/msds.
- By mail, or in case of an emergency, call 1-800-364-3577 or 1-651-737-6501.

When using any equipment, always follow the manufacturers' instructions for safe operation.

## **Warranty and Limited Remedies**

# 3M MCS Warranty for Graphics Produced on HP DesignJet Printers and Epson Stylus Pro Printers

The following is made in lieu of all other express or implied warranties, including any implied warranty of merchantability or fitness for a particular purpose: We warrant graphics produced by a 3M Ink Jet Registered Fabricator made with imaging media 8522, printed on an approved HP thermal ink jet printer according to HP's recommendations or Epson Stylus Pro printer according to Epson's recommendations, overlaminated with 8519 or 8520, and applied to a Warranted Substrate according to 3M's recommendations. These

graphics are covered against failure caused by ultraviolet light, temperature extremes, pollution, and other elements.

If a graphic fails to perform in accordance with 3M product specifications within this time frame, 3M will replace the materials at no charge. These remedies are exclusive. In no case shall 3M be liable for any direct, indirect, or consequential damages, including any labor charges.

### **3M Related Literature**

Listed below is related 3M technical literature that may be of interest. You may view and print these Bulletins from our Web site at www.scotchprint.com, or order them via our Faxon-Demand (FOD) system. Call one of these phone numbers to order the desired bulletins, and specify the FOD document number provided in the chart.

United States or Canada: 1-800-364-0768 International: 1-651-732-6506

Subject	Bulletin No.	FOD No.
Product Bulletins		
3M Scotchcal Overlaminate 8519 and 8520	8519/8520	4524
Instruction Bulletins		
Making thermal ink jet graphics	4.23	6523
Application, substrate selection, preparation and substrate-specific application techniques	5.1	7001
Warranties		
Worldwide 3M MCS Warranty Packet (includes all Commercial Graphics MCS Warranty Packet)	et irranties)	9503
Worldwide 3M * MCS * Warranty Overview-Folder		9504

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Epson and Stylus Pro are trademarks of Epson.
HP and DesignJet are tradenames of Hewlett Packard.
Sintra is a trademark of Swiss Aluminum Utd.
Imron is a registered trademark of DaPont in the United States

### **Bulletin Change Summary**

The Epson Stylus Pro Printers 9500, 10000 10600, and Epson Archival Inks have been added to this bulletin. Additional changes resulting from this addition are marked with black bars in the margin.

### 3M

Commercial Graphics Division 3M Center, Building 220-6W-06 PO Box 33220 St. Paul, MN 55133-3220 USA General Info. 1-800-374-6772 Technical Info. 1-800-328-3908 3M Canada P.O. Box 5757 London, Ontario Canada NoA 4T1 1-8(0)-265-1840 Fax 519-452-6345

Pax 3-651-736-4233 Fax on-Demand 1-800-364-0768 US/Canada or 1-651-732-6506 International Fax-on-Demand document 4506 www.sochprint.com 3M México, S.A. de C.V.

Av. Santa Fe No. 55 Col. Santa Fe, Del. Alvaro Obregón México, D.F. 01210 52-55-52-70-04-00 Fax 52-55-52-70-22-77 3M Puerto Rico, Inc. Puerto Rico Industrial Park P.O. Box 100 Carolina, PR (00986-0100 787-620-3000 Fax 787-750-3035

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Product Bulletin 8522 – 3